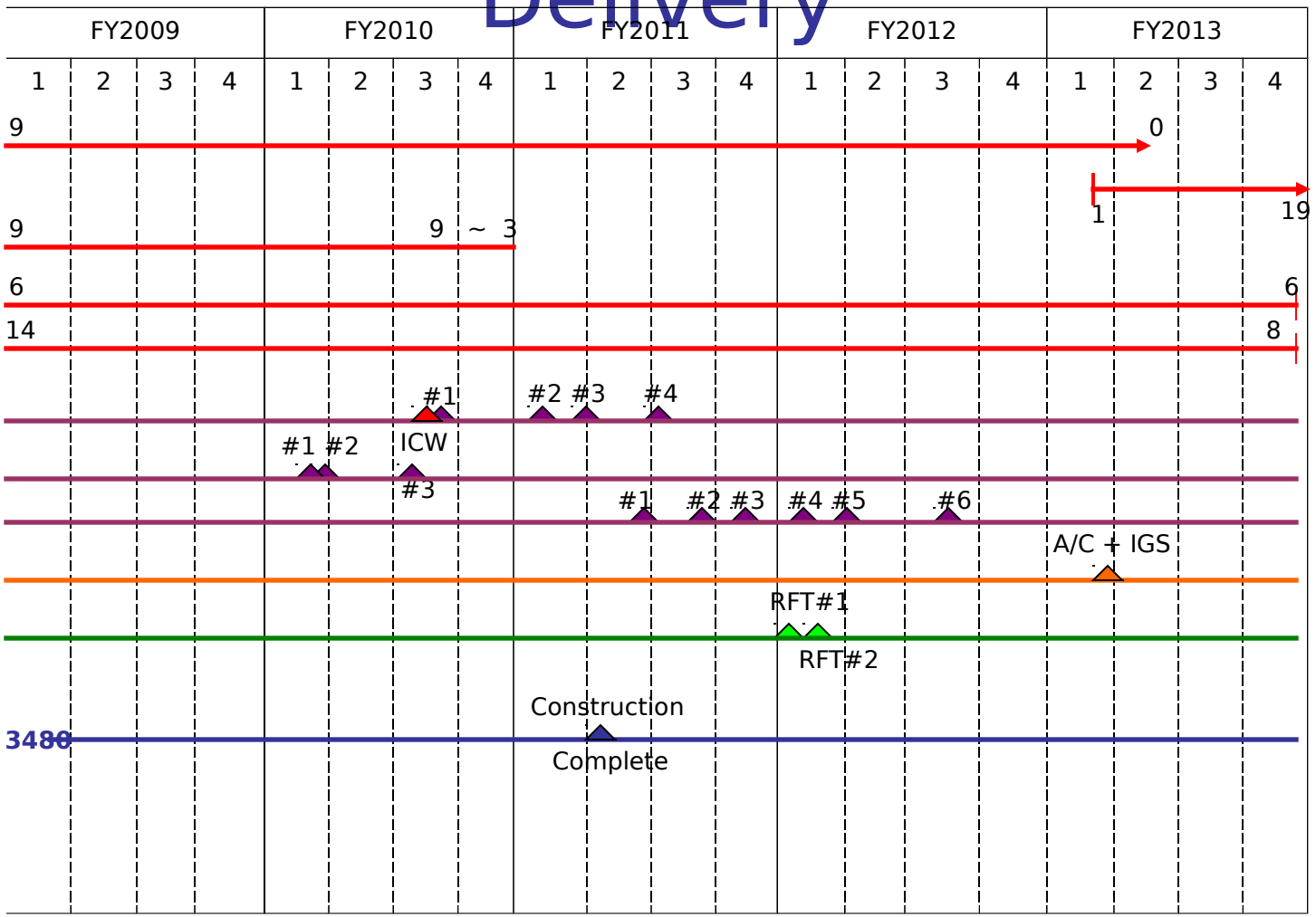
21st Century NFO Training Requirements

- **NFOs will require greater basic to advanced skill set training as integration/complexity of Aircraft/Missions increase.**
  - Airmanship
  - Navigation
  - Communications
  - Situational Awareness
  - Multi-Task Management
  - Airborne Battle Management/Decision Making
  - Cockpit Leadership (CRM)

UMFO History

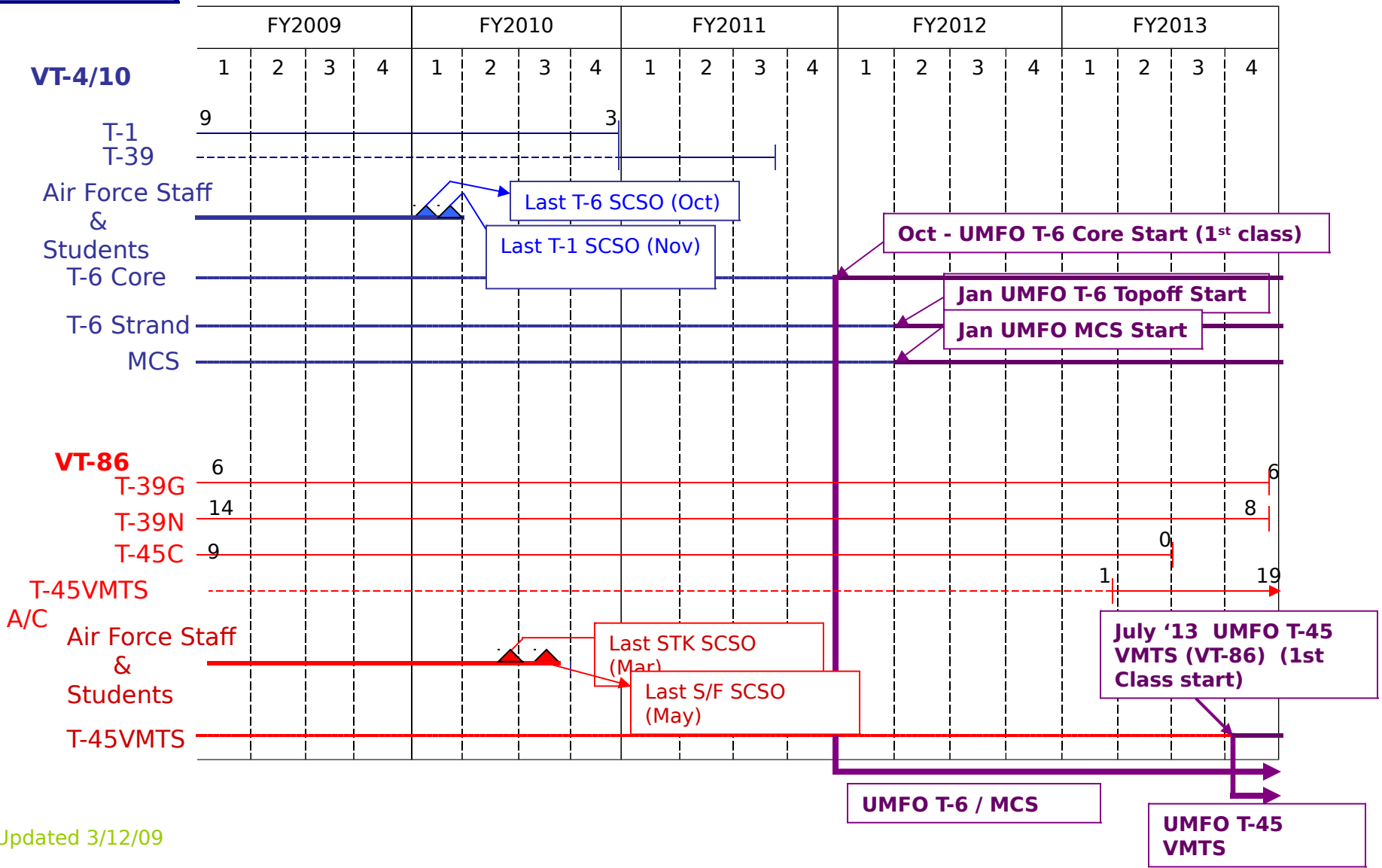
- Undergraduate Military Flight Officer Program – originally “joint” USN & USAF
- 1999 need for T-39 and T-2 replacement recognized
- 2003 T-48 program initiated
- 2004 T-48 failed to meet spec requirements and discontinued
- 2005 Navy proposes T-6/T-45 training program
- 2005 BRAC: All USAF CSO training to move to NAS Pensacola by FY 10
- 2006 USN UMFO fully funded by DON
- Estimate 2013 UMFO Program Fully Operational (T-6 & T-45 w/ VMTS)

UMFO Aircraft/Simulator Delivery



Updated 3/12/09

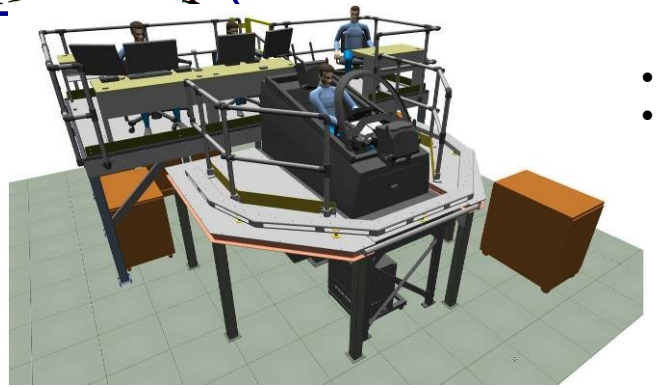
UMFO Implementation



Updated 3/12/09

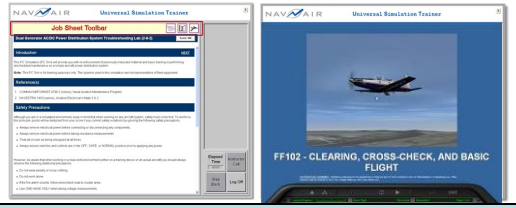
Ground Based Training Systems (GBTS)

UMFO GBTS Overview



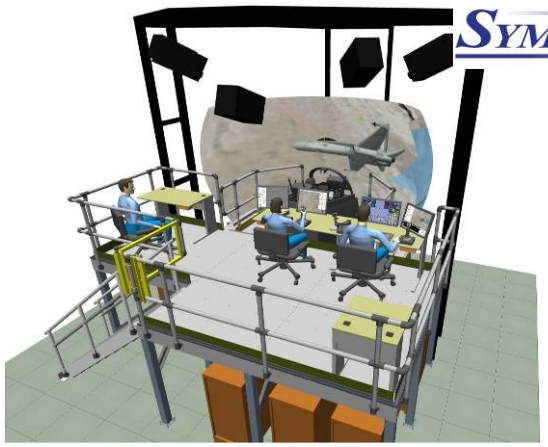
- Aft cockpit
- Commonality with SYMVIONICS 2F138E

T-45C Instrument Flight Trainer


Universal Simulation Trainer
Job Sheet Toolbar
Universal Simulation Trainer
FF102 - CLEARING, CROSS-CHECK, AND BASIC FLIGHT

- Instructional System Development
- Courseware for Core, Strike, Strike Fighter
- Task Simulations
- Student and Instructor Under Training

T-6A & T-45C Interactive Courseware

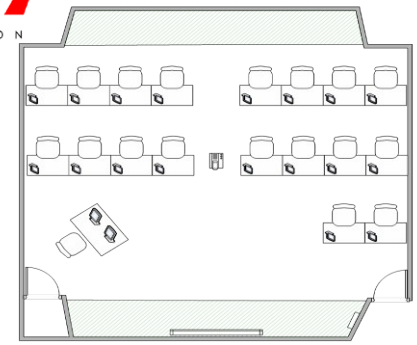


SYMVIONICS, Inc.

- Upgrade of IFT
- Out-the-Window Visual Display
- Radar-Electronic Warfare-Weapons

T-45C Operational Flight Trainer

CARLEY CORPORATION



- Lecture Electronic Classroom
- Interactive Electronic Classroom
- Learning Resource Center

Electronic Classrooms

Electronic Classrooms

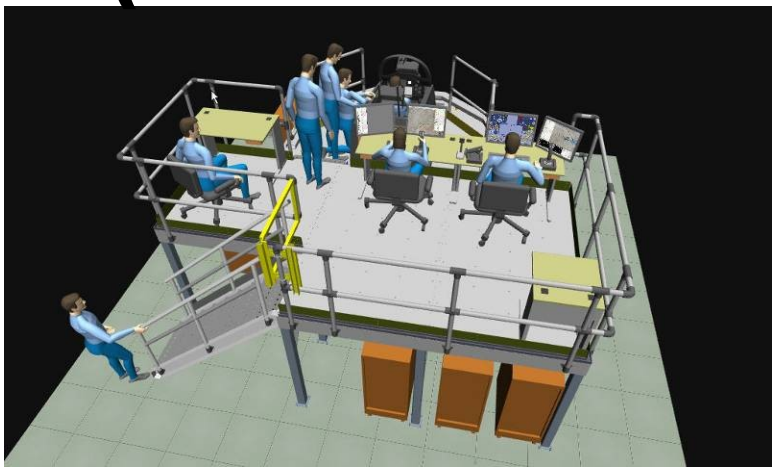
Electronic Classrooms (EC)

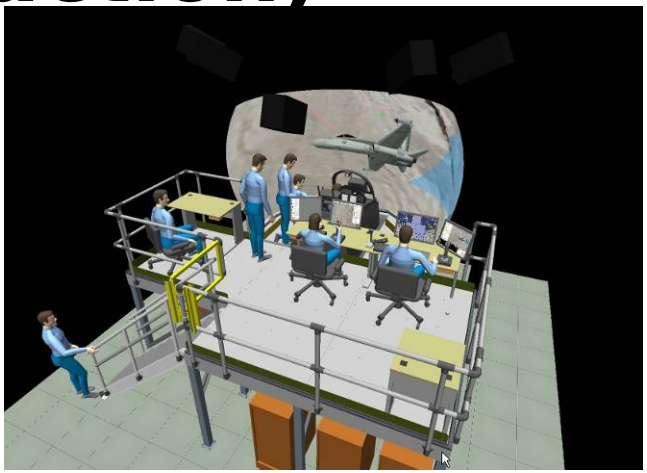
- 3 Types of Classrooms
  - Lecture Electronic Classroom (LEC)
  - Interactive Electronic Classroom (IEC)
  - Learning Resource Center Electronic Classroom (LRC)

LEC	IEC	LRC
The Instructor has a computer and uses it to present information to the class. -Student Polling Stations (4-6 buttons – facilitate impromptu polling and planned polling.)	 The Student computer can be in an environment controlled by the Instructor in an IEC. –Instructor station -Student 19” swivel -Computer, keyboard, mouse -Lesson by oneself -PTT?	 Each student has a computer. It can be in a self-paced environment in an LRC. – “Caroles” -2x19” Flat screen -Computer, keyboard, mouse -Right Hand Controller?

T-45 IFT & OFT

T-45 IFT & OFT
(Under Construction)

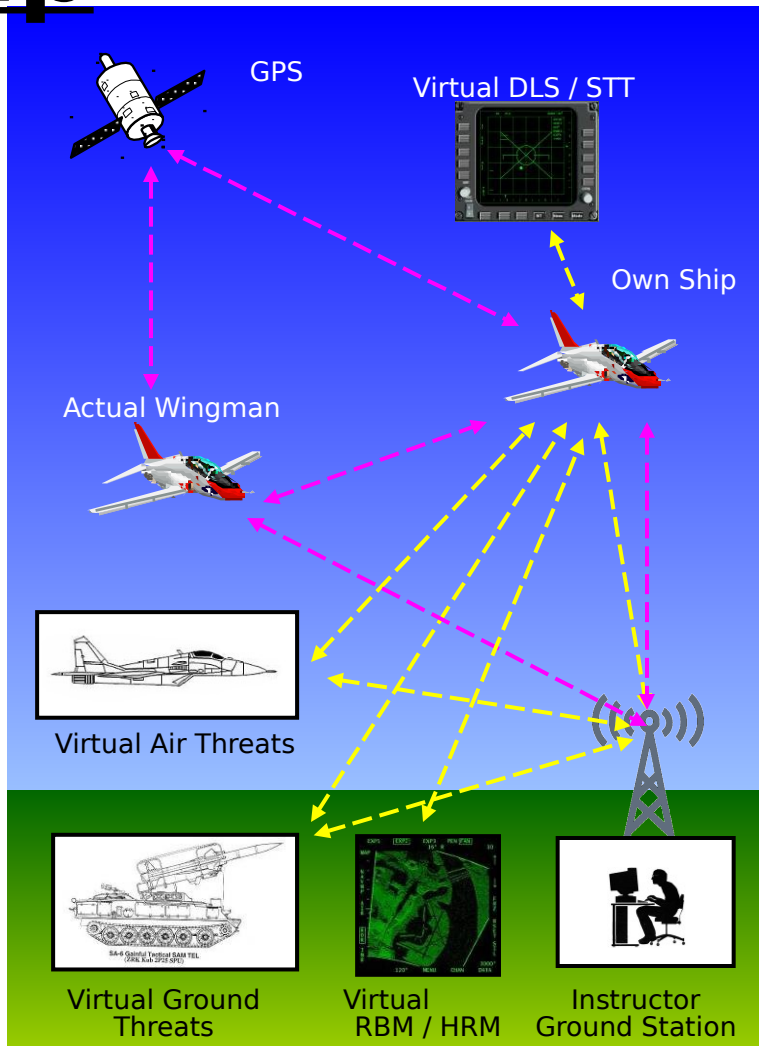




Virtual Mission Training System (VMTS)

VMTS Concept Recap

- Virtual Mission Training System
  - Synthetic radar provides simulated radar picture from GPS position v. stored data base / data links
- Modes:
  - Air-to-Ground RBM / HRM
    - Virtual ground emitters
  - Air-to-Air
    - Simulated targets
    - Actual wingmen
- Instructor Ground Station
- Debrief Station



Instructor Operator Station (IOS)

Stealth or 3D Display

- Orbit, Onboard, Tracking, or Chase Views
- Heads Up Display

MSG06-085836-206.ppt

MSG06-085836-041.ppt

Multi-Crew Simulator (MCS)

MCS Design & Syllabus

- Designed to foster skills in
  - Advanced navigation systems
  - Electronic warfare
  - Battlespace management
  - Communications effectiveness
  - Situational awareness
  - In-flight decision-making
  - Mission commander skills
  - All MCS systems will be **UNCLASSIFIED**

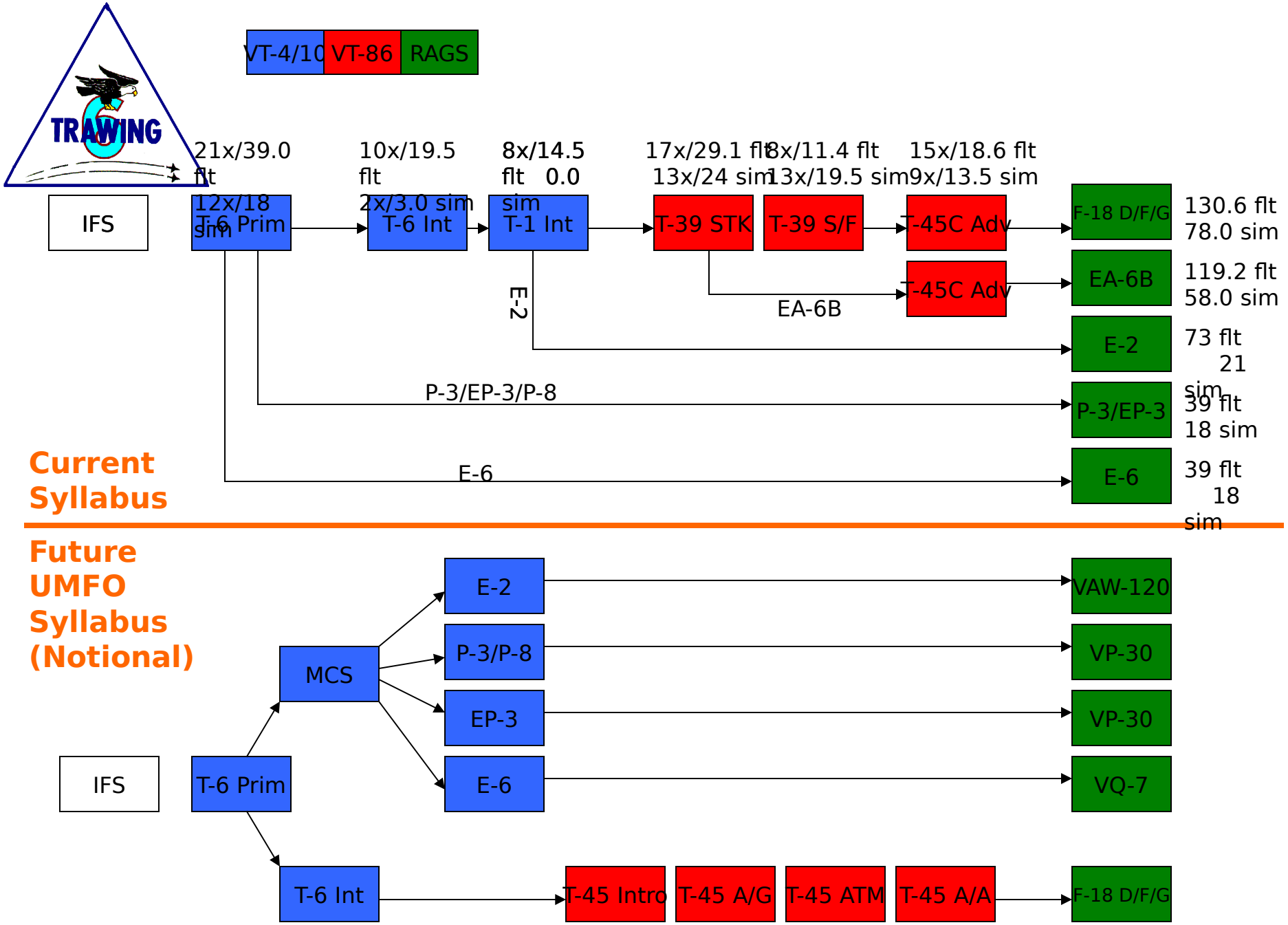
- Syllabus will consist of a core stage focusing on skills common to P-3/8 EP-3, E-2 & E-6 SNFOs
  - Following Core, SNFOs will split into Platform specific strands

Multi-Crew Simulator

Adaptable and Flexible

Reconfigurable Touchscreen

- Used in E2, P-3/P-8, EP-3 & E-6 training tracks
- CRM, emergency, and real world scenarios can be represented in any combination to meet curriculum objectives


VT-4/10
VT-86
RAGS
21x/39.0 flt
10x/19.5 flt
8x/14.5 flt 0.0 sim
17x/29.1 flt 13x/24 sim
8x/11.4 flt 13x/19.5 sim
15x/18.6 flt 9x/13.5 sim
IFS
T-6 Prim
12x/18 sim
T-6 Int
2x/3.0 sim
T-1 Int
T-39 STK
T-39 S/F
T-45C Adv
F-18 D/F/G
130.6 flt 78.0 sim
T-45C Adv
EA-6B
119.2 flt 58.0 sim
EA-6B
E-2
E-2
73 flt 21 sim
P-3/EP-3/P-8
P-3/EP-3
39 flt 18 sim
E-6
E-6
39 flt 18 sim
Current Syllabus
Future UMFO Syllabus (Notional)
IFS
T-6 Prim
MCS
E-2
P-3/P-8
EP-3
E-6
VAW-120
VP-30
VP-30
VQ-7
T-6 Int
T-45 Intro
T-45 A/G
T-45 ATM
T-45 A/A
F-18 D/F/G

END